

WHAT IS CLAIMED IS:

1. An error correction apparatus comprising:
 - a receiving section configured to receive a signal;
 - 5 an amplifier section configured to amplify the received signal received by the receiving section;
 - an automatic gain control section configured to generate a control signal and to control a gain of the amplifier section based on the generated control signal,
- 10 so as to maintain the amplified received signal at a predetermined level; and
 - a turbo decoder configured to execute an error correction process on the received signal to thereby output a decoding result of the executed received signal based on the generated control signal.
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2. The error correction apparatus according to claim 1, the turbo decoder including a decoding section and a multiplication section coupled to the decoding section, configured to multiply the received signal by the generated control signal, so that the received signal has a reverse property of the generated control signal before the received signal is supplied to the decoding section of the turbo decoder.
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3. The error correction apparatus according to claim 1, wherein the turbo decoder including a calculating section configured to calculate a path metric of the received signal, and an outputting
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section configured to output a decoding result of the received signal based on the calculated path metric, and a plurality of lookup tables related to a weighting process executed when calculating the path metric, the 5 lookup tables being switched in accordance with the generated control signal to thereby change a weight used to calculate the path metric.

4. The error correction apparatus according to claim 1, further comprising a reception power 10 calculating section configured to calculate a reception power of the received signal, and an SIR estimating section configured to estimate a signal-to-interference ratio (SIR) of the received signal on the basis of the calculated reception power and by the generated control 15 signal, the turbo decoder outputting a decoding result of the received signal, on the basis of the estimated SIR.